

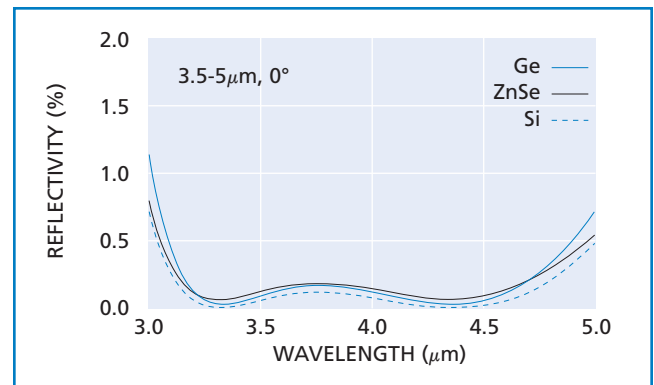
Infrared Laser Windows

CVI Melles Griot offers a complete line of antireflective coatings for the 3–5 μm and 8–12 μm regions on germanium, silicon, ZnS, ZnSe and other IR transmitting materials. We specialize in high efficiency, non-thoriated antireflection coatings with outstanding environmental characteristics. All of our high durability coatings will pass the 10-days humidity test as specified in MILSTD-810C Method 507, Procedure I, and the 24 hours salt spray test as specified in MIL-M-13508. The coatings will also pass the severe abrasion test of MIL-F-48616 on substrates with a sufficiently high Knoop number. Please specify these at the time of your order.

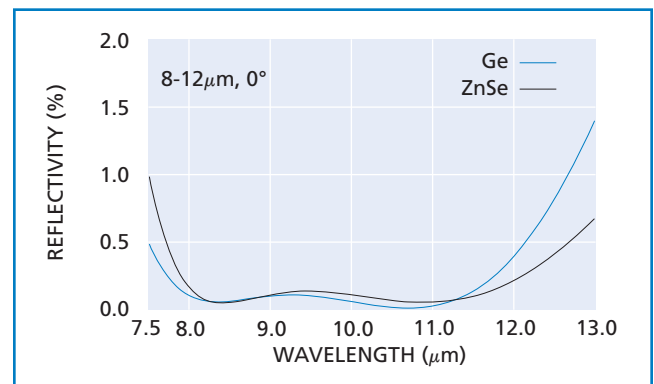
Our nonradioactive, high-efficiency and high-durability antireflection coating on germanium (HEHD) is unique in combining the environmental durability of an exterior coating with the spectral characteristics required from an interior element.

Custom coatings and bandwidths are available. Call for specifications, pricing and delivery.

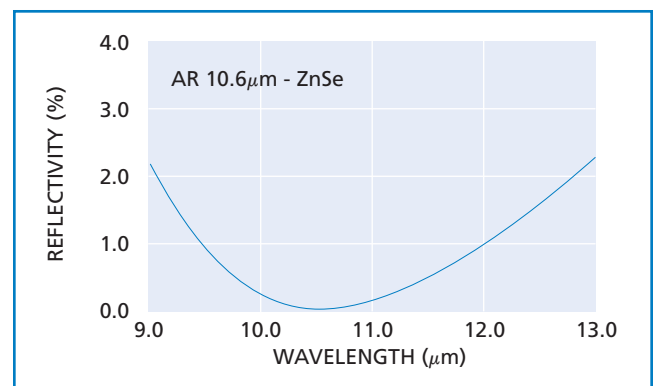
- Remote sensing
- Thermal imaging at high thermal and local resolution
- Medical thermography
- Surveillance and security
- Industrial process control AR coatings available
- Mirror mounts are available



AR at 3.5-5 μm for Ge, ZnSe, and Si



AR at 8-12 μm for Ge and ZnSe



AR at 10.6 μm for ZnSe

SPECIFICATIONS: Infrared Laser Windows

Antireflection Coating	8–12 μm : (Ge, ZnS, or ZnSe) Single Wavelength, $R < 0.25\%$ at 0° 2.9 μm , 4.6 μm , and 10.6 μm (ZnSe): $R < 0.25\%$ at 0°
Coating Technology	Electron Beam Multilayer Dielectric
Adhesion and Durability	Per MIL-C-675C. Insoluble in lab solvents.
Clear Aperture	$\geq 85\%$ of central diameter
Angle of Incidence	User specified
Damage Threshold	
Pulsed	Broadband: 10 J/cm ² , 20 nsec, 20 Hz @ 1064 nm Dual wavelength: 5 J/cm ² , 20 nsec, 20 Hz @ 532 nm; 10 J/cm ² , 20 nsec, 20 Hz @ 1064 nm
cw	1 MW/cm ² @ 1064nm
Optical Material	Si, Ge, ZnSe, ZnS, or CaF ₂
Transmitted Wavefront Error	$\lambda/20$ @ 10.6 μm
Surface Quality	40-20 scratch and dig
Diameter	$\phi + 0/ - 0.25$ mm
Thickness	$t \pm 0.25$ mm
Wedge	≤ 10 arc sec, ≤ 5 arc min, or 30 ± 5 arc min

Build Your Own

IW1 — PW — 1112 — ZNSE — 10.6 — 0

Product Code

IW1	Window, one surface AR Coated
IW2	Window, two surface AR Coated

Wedge

PW	< 5 arc minutes
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Size Code

Diameter Thickness

0508	0.50"	2.0 mm
0708	0.75"	2.0 mm
1012	1.00"	3.2 mm
1112	27.9 mm	3.2 mm
1512	1.50"	3.2 mm
2020	2.00"	5.0 mm

Substrate Material

CFIR	IR grade CaF ₂
GE	Ge
ZNSE	ZnSe
SI	Si

AR Coating Wavelength μm

2.0-2.5	2.94	3.5-5.0	4.6	8.0-12.0	10.6
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Angle of Incidence in Degrees with Polarization

0	Normal incidence
45S	45 degrees, S polarization
45P	45 degrees, P polarization
45UNP	45 degrees, Unpolarized